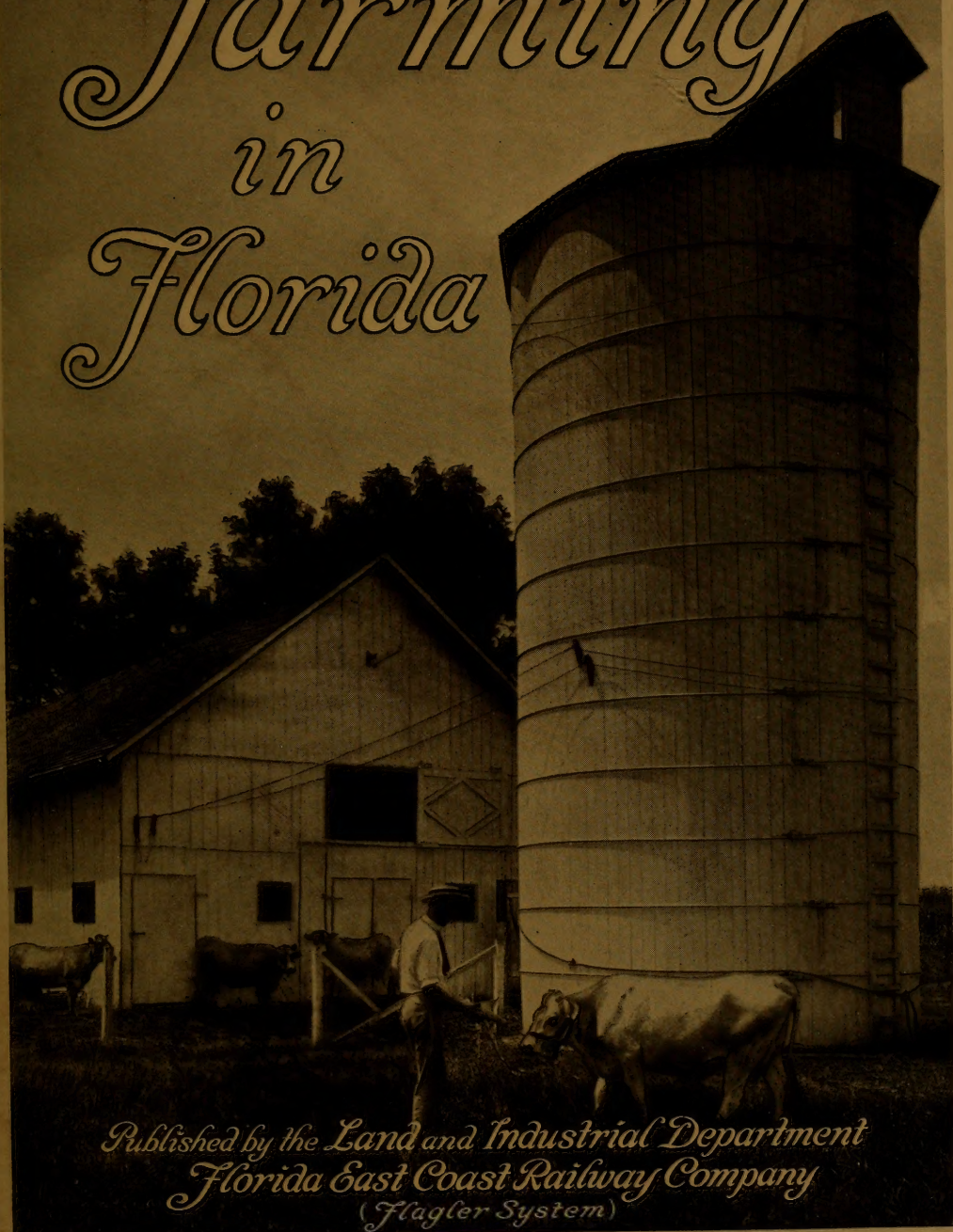


Live Stock Farming in Florida



*Published by the Land and Industrial Department
Florida East Coast Railway Company
(Flagler System)*

LIVESTOCK FARMING IN FLORIDA

ALONG THE LINES OF THE
FLORIDA EAST COAST RAILWAY



**The Native Scrub--The Basis of Successful
Livestock Farming in Florida**

Published by the LAND AND
INDUSTRIAL DEPARTMENT
of the FLORIDA EAST
COAST RAILWAY (Flagler System)
J. E. INGRAHAM, *Vice-President*
Saint Augustine, Florida

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Publisher's Note

THE purpose of this booklet is to aid in the development of Florida's unparalleled agricultural resources. After years of careful observation and investigation the publishers have become convinced that the livestock industry is the correct basis upon which to build substantially one of the greatest agricultural states in the Union. In making this statement it is not intended to minimize the wonderful advantages and opportunities for profit Florida offers to the fruit grower and the truck gardener. On the contrary, Florida's growth as a livestock state will mean a corresponding growth of the trucking and fruit growing interests. It means a vast increase in capital for the general development of the state, besides the greater fertility of the soil that will result.

The information contained herein is authentic. It comes from some of the best authorities in the country, both in and out of Florida. It has been carefully edited and prepared with the idea of presenting the important facts in a clear and concise manner. The photographs, which were all made in Florida, are labelled exactly where they were taken and most of them were made expressly for this booklet.

The publishers believe that the array of facts and illustrations herein should convince the livestock farmer, wherever he may be found, that the livestock business in Florida will yield as great or greater profits than he has ever before received. The time to engage in the livestock industry in Florida is at hand.



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Preface

DIVERSIFIED farming, including the raising of livestock, poultry, cattle, hogs and sheep, has proved to be the safest, most profitable and most successful method of agriculture in the United States. Any "one crop" section, whether it be fruit, trucking, wheat or corn, is liable to meet with failure some years, but the farmer who combines livestock with any or all other branches of farming has something substantial to fall back upon.

All the "money crops" produced in Florida have been advertised far and wide for years. The "proof of the pudding is in the eating" is an old and true maxim. Every town and hamlet in the United States and portions of Canada know and like our fruits and eat our vegetables that are grown from December to April and supplied to the Northern markets, but very little has been said or done to make known to the balance of the country that Florida is also a livestock state where beef is produced more easily and at less cost than in any of the beef producing sections of the North and West.

The Florida East Coast Railway Company has been developing the country along its lines for a number of years, and where there was only a wilderness a few years ago are now found scores of prosperous cities, towns and farming communities. Being desirous of promoting the wealth and prosperity of the settlements on our lines, we are publishing this booklet with a view toward encouraging the increase in livestock farming.

To place before the reader in a brief and comprehensive manner, the past, present and future of this industry, we have secured and publish herein articles and letters from prominent and experienced stock farmers in this state today, together with many illustrations of Florida livestock and farm crops. These men have been engaged in the business for years and their opinions are valuable.

To give the reader the present status of this branch of farming, we give on the following pages the number of animals on hand in each county traversed by the Florida East Coast Railway, on



Native Florida Grass

July 1st, 1912, as given in the twelfth Biennial Report of the
Commissioner of Agriculture of the State of Florida:

County	Horses	Native Stock Cattle	Graded Cattle and Milk Cows	Hogs	Sheep
Duval	2,639	15,134	2,123	17,401	500
St. Johns	1,483	28,101	1,462	24,468	4,105
Putnam	1,030	13,993	1,320	13,563	9
Volusia	2,044	28,318	(no rpt.)	17,096	12,430
Brevard	457	10,667	210	5,580	(no rpt.)
Seminole and Orange	2,169	34,945	1,964	8,189	1,680
Osceola	(no rpt.)	(est.) 75,000	(no rpt.)	(no rpt.)	(no rpt.)
St. Lucie	346	19,277	157	3,784	55
Palm Beach	249	3,135	270	1,138	(none)
Dade	847	78	1,392	949	(none)
Total	11,264	228,648	8,898	92,168	18,779

*Total mules in counties named 4,781

*Total goats in counties named 3,955

*Total chickens in counties named 701,075

*Osceola County not reported.

Total Acreage of Crops in Florida

AS reported by W. A. McRae, Commissioner of Agriculture of
the State of Florida. All reports cover the period between
July 1st, 1911, and July 1st, 1912:

Field crops, acres	937,264
Vegetable and garden products, acres	63,241
Total acreage in cultivation	1,000,505

Total Value of Florida Farm Products

Field Crops	\$16,051,730
Vegetable and garden products	8,056,685
Fruit products	9,689,774
Livestock on hand	23,510,479
Poultry and products	3,527,286
Dairy products	2,518,241
Miscellaneous products	133,713
Total	\$63,487,908



An Ideal Range in Central Florida

Field Crop Production in Florida

Corn	5,453,936 bushels	\$4,455,161
Oats	287,708 bushels	232,250
Rye	1,727 bushels	4,250
Rice	14,737 bushels	22,609
Peanuts	1,534,736 bushels	1,630,275
Hay, native grasses	46,650 tons	516,351
Millet	918 tons	16,057
Cassava	923 tons	5,360
Alfalfa	110 tons	2,965
Cabbage	193,729 crates	295,279
Irish potatoes	1,080,215 bushels	1,640,882
Radishes	98,403 crates	133,183
Sugar cane	67,846 barrels syrup and 2,933 pounds sugar	920,949
Velvet beans	320,930 bushels and 2,526 tons hay	645,488
Field peas	76,885 bushels and 9,849 tons hay	330,350

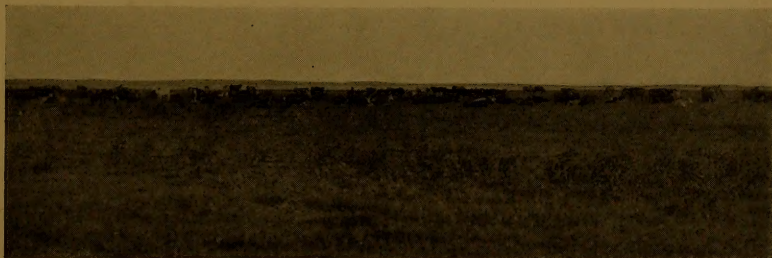
The above table does not include the cotton crop, valued at \$4,284,803.00; the tobacco crop at \$586,607.00; and a large variety of well known vegetable and fruit crops not used for stock feed which were valued at nearly \$20,000,000.00.

Livestock on Hand July 1st, 1912

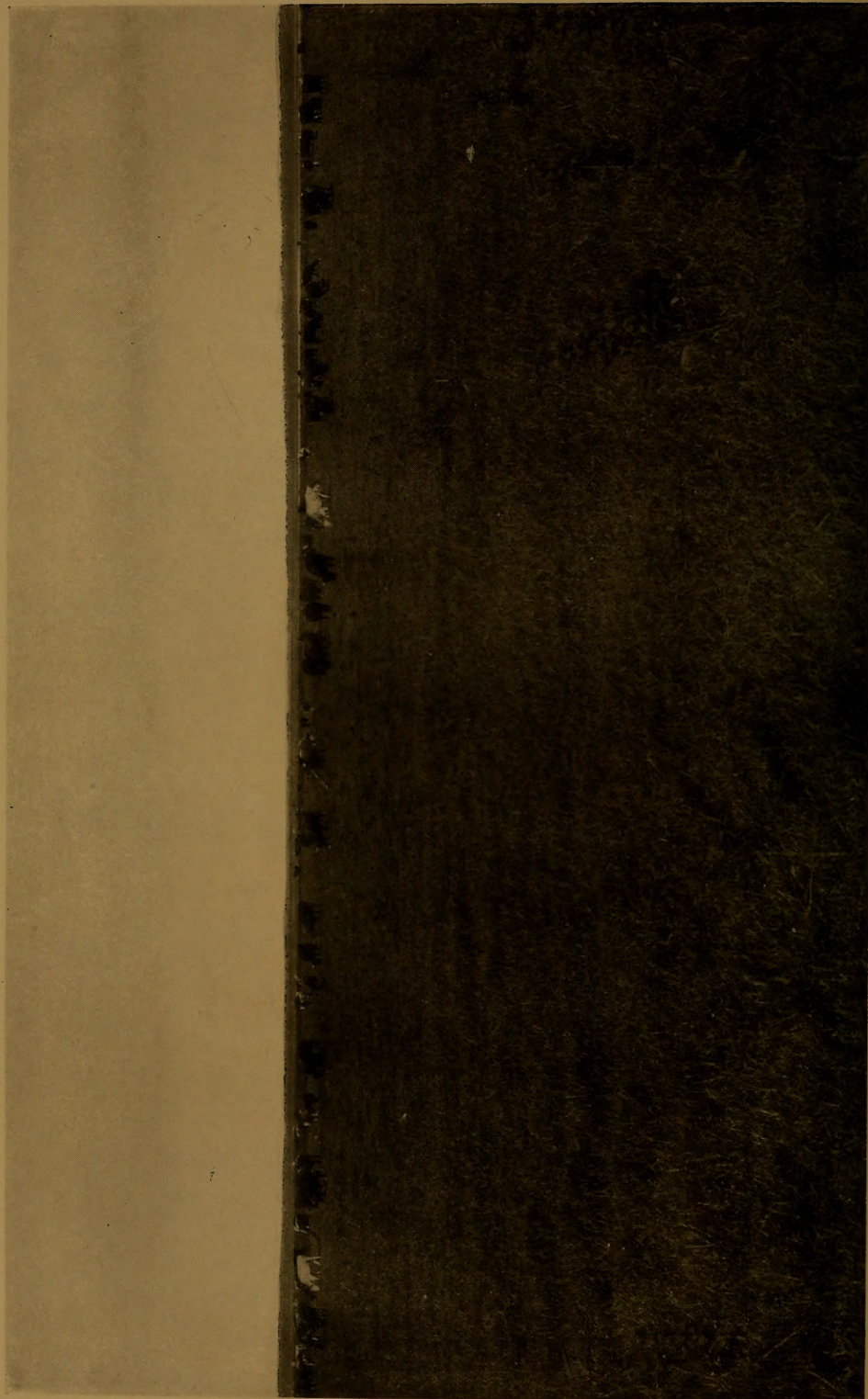
	Number	Value
Horses	48,418	\$6,009,142
Colts	1,942	115,401
Mules	32,352	5,396,601
Mule colts	670	78,920
Asses and Jennets	248	15,361
Work Oxen,	9,320	292,997
Stock cattle, Native breeds	772,076	7,224,544
Thoroughbred cattle	14,188	489,089
1/2 grades and up		
Cows for milk only	39,621	1,215,842
Hogs	661,437	1,858,915
Sheep and lambs	114,501	287,699
Goats	43,998	43,854
Poultry	2,793,932	1,370,129

Miscellaneous

Eggs sold and used	8,175,251 dozens	\$2,157,157
Milk sold and used	8,131,761 gallons	2,166,018
Butter sold and used	1,133,887 pounds	351,964
Cheese sold and used	1,872 pounds	259
Beeswax	25,280 pounds	4,768
Bees	20,577 stands	
Honey	675,718 pounds	72,363
Wool, spring clip,	261,017 pounds and 83,344 fleeces	56,582



On the Range in Seminole County



Native Cattle on the Range Northeast of Chuluota, Seminole County

Introduction

By Hon. J. N. Whitner, Manager of Tosohatchee
Ranch, Sanford, Florida

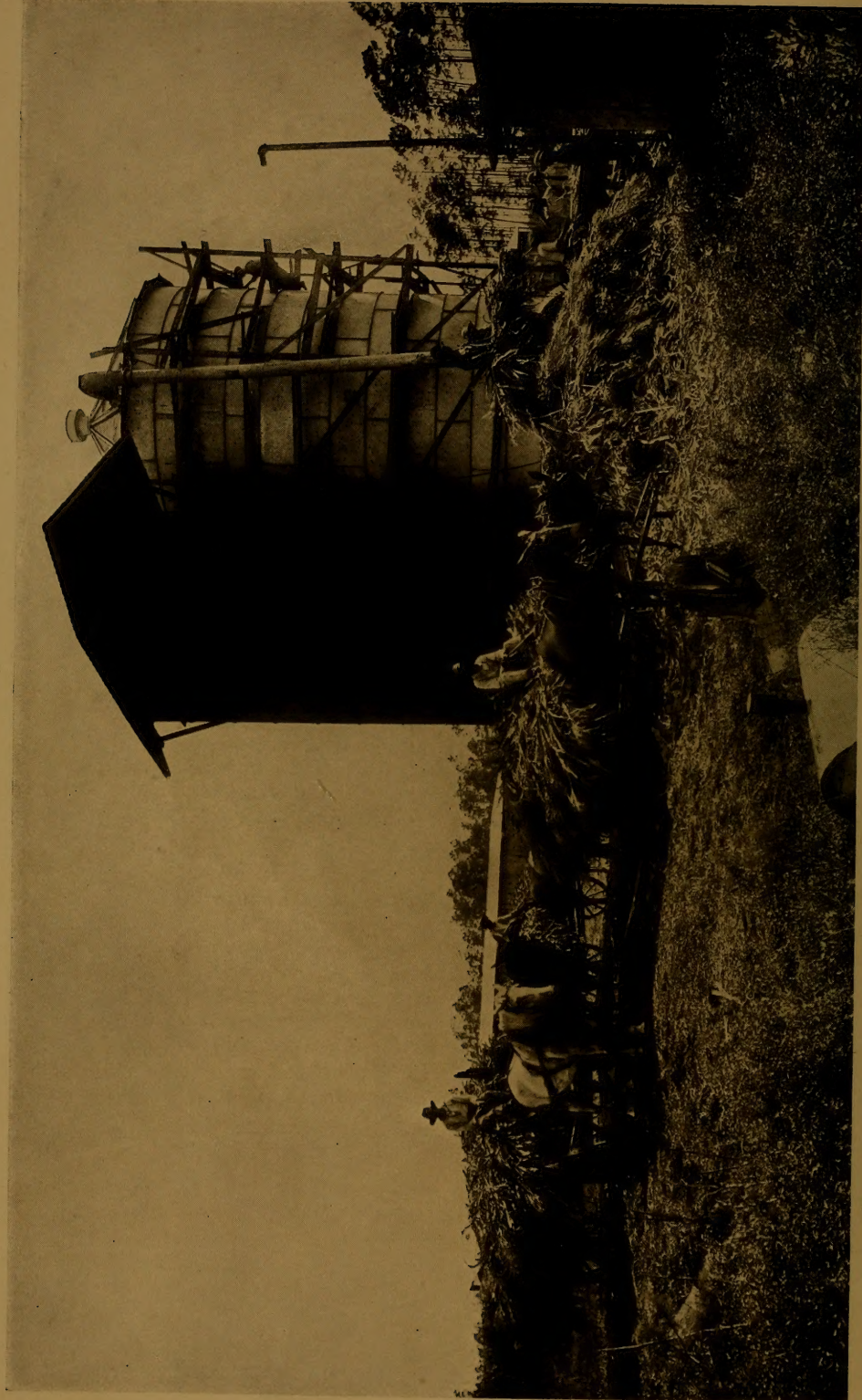


THE beef supply is now one of the recognized world problems. The advancing price of land and the need for farms and orchards is rapidly reducing the area of grazing land, thereby making a shortage in beef with resulting high prices. The 1913 Year Book of the Department of Agriculture says the census of 1910 shows "a decrease in ten years of 9,385,343 head or 18.5 per cent. of all cattle other than milch cows." Since the increase in population for the same decade in the United States was twenty per cent., we find the startling decrease in the supply of beef of 38 per cent. per capita.

The Year Book says "the question of providing enough beef to supply the demand is now recognized as one of world-wide importance," and further discussing the subject devotes a section of the book, beginning as follows:

"Possibilities of the South—There is one section that can produce more cattle and produce them more cheaply than any other section of the whole country, for the lands are still cheap, the grazing is good, the pasture season is long, feeds can be produced at a minimum cost, and inexpensive shelter only is required. That section of the country is the South."

In Florida no shelter is required and the pasture season is perpetual, from January to January.



Filling New Steel Silo with Corn Enallage on Hastings Cold Storage Company's Farm near Hastings, St. Johns County
[Scaffolding around the silo was being used by workmen completing its construction]

Why Florida Is Adapted to Raising Livestock

WE are indebted to Mr. W. A. McRae, Florida's commissioner of agriculture, for the following:

Tallahassee, Florida, September 12th, 1914.

Hon. J. E. Ingraham,
St. Augustine, Florida.

Dear Sir:

There are many reasons why Florida is adapted to the successful growing of livestock of all kinds, almost without limit.

Among the principal reasons is its unlimited and unfailing supply of water, which is absolutely essential in every country to the successful production of livestock of all kinds. Where water is not running from natural sources, there is hardly a locality in the state that cannot be made to artificially produce water enough for all reasonable purposes, whether it be stock raising or other purposes. Another which is equally as important is the short feeding and sheltering period necessary in this state as compared with other states of the Union, it being necessary, and that in parts of the state only, to feed no more than three months and to shelter, possibly all told, no more than six weeks in the entire year.

Another and as great an advantage in this state is the adaptability of the soils of Florida to the production of all kinds of forage crops and at less cost of production than elsewhere. Of course the climate has much to do with this as well as the rainfall and the soil, but because of these conditions there is no section of the United States that can surpass Florida as a livestock producing country.

Of the entire area of Florida there are only about 3,000,000 acres in farms and under farming control. There are not less than 30,000,000 acres that can be used to a greater or less extent for forage production or grazing purposes for livestock. This will show that Florida has within her boundaries the greatest grazing region east of the Mississippi river, and practically an unlimited capacity to produce forage crops to supply the livestock that could be grown upon it.

The number of livestock of all kinds in the state is about 2,000,000 in round numbers, and the value of these is \$25,000,000. Instead of this small number there should be not less than 10,000,000 head of livestock growing in Florida, in which case the value instead of being \$25,000,000, should be \$250,000,000 to \$300,000,000. This may sound large, but it is entirely practical and reasonable and can be easily attained.



Native Steers in Feeding Pens of Hastings Cold Storage Company, St. Johns County

If the vast area of idle lands in the South, including Florida, were put to these purposes, there would be no necessity for the big meat packers to go to Argentina to produce or purchase their meat supplies for the American people or for export. There is land enough idle in the South, including Florida, to produce livestock to supply not only the people of the United States but all of the export trade that America can control, and in all of this Florida should have a large and important part. In fact, no other Southern state could excel Florida in this respect under intelligent and persistent direction.

The number of cattle on hand (in Florida) on the first of July, 1912, when our last report was made up, was 835,205. At the same time the number of hogs in the state of all ages was 661,437. Sheep of all ages, 114,501.

The aggregate acreage in grain crops used for feed was 642,942 and the yield in bushels of grain and feed stuffs, which included peanuts and sweet potatoes used for stock feed, was 10,644,240 bushels. The total acreage in forage crops of all kinds was 165,466. The yield in tons of forage, which of course included the hay of all kinds, was 177,340 tons. The tonnage does not appear to be so large, but when it is considered that an average value of \$20.00 per ton is a conservative figure as to value, it shows forage crops of more than three and a half million dollars in value.

Yours very truly,

W. A. McRAE,
Commissioner of Agriculture.



Bunch of Native Three-Year-Old Steers on Hastings Cold Storage Company's Farm,
St. Johns County

Present Conditions

By Hon. J. N. Whitner, Manager of Tosohatchee Ranch,
Sanford, Florida

AMONG the unexploited resources of Florida, improved stock raising, especially beef cattle, is of all others the most promising of big profits and pleasant occupation without the risk, that in some measure, attends other enterprises. It is true that raising beef in Florida has long been profitable, but it has been so not by the help of man but rather in spite of him, as a glance at existing conditions will show.

To begin with, the original stock of cattle was imported by the Spaniards, and judging from that nation's fondness for bull fights, it is fair to surmise that they bred cattle largely to fight and not for beef. At any rate these cattle have run at large on our ranges and if left entirely to nature, perhaps under the law of the survival of the fittest, the stock might not have deteriorated much, but by the interference of man in breeding, has done its worst. These degenerates from a questionable parentage have been for generations infested with the cattle tick, which has not only sucked their life blood in large quantities, but has infected them with fever germs, of what is known as Texas or tick fever. While they do not die of fever because immune from birth, they carry the infection, always having the same anæmic condition as a human being with malaria, to which



Native Cows and Bull on S. H. Gaitskill's Farm at McIntosh, Marion County

disease in people it is no doubt akin, being splenetic. Under the most favorable conditions of seasons and pasture they have sufficient vigor to put on flesh, thrive and look well, but on poor pasture and in bad weather they are little able to endure hardship and look and no doubt feel like a man with a combined case of malaria and hookworms. As though this were not enough, the mistaken friend and owner has annually and oftener burnt the grass that nature would have supplied. Burning the grass annually is bad in itself, but persistence in it destroys the fertility of the soil.

In spite of these deterrents the cattle business in Florida has been and is very profitable, and in the past year forty thousand to fifty thousand head have been shipped out of the state, principally to the feeding pens of Oklahoma, Missouri and Kansas.

Pasture

SINCE "all flesh is grass," the question of raising good beef profitably in Florida, in its last analysis, will depend upon whether we can or do have good, cheap pastures.

This article does not undertake to discuss the subject as regards the state at large, nor all qualities of land, but only the flatwoods and prairies, more particularly that section lying between the Kissimmee River on the west, and the St. Johns and Indian Rivers on the east, on which great herds of cattle have fed for the past fifty



"Cowpunchers" on Tosohatchee Ranch, Seminole County

years. These lands are very fertile, notwithstanding man has interfered to his own injury and by annual fires has burnt up the vegetable matter and prevented the accumulation of humus with its precious content of nitrogen, the expensive ingredient of all fertilizer. Fortunately, fire could not destroy the potash and phosphoric acid, and on the level sandy soil it has not been washed away.

The present abundant growth of grass, weeds, shrubs and flowers prove the fertility of the soil and the long season of nine or ten months, in which vegetation grows, is sufficient for nature to restore the loss. This long season, with an average rainfall of sixty inches, gives ample time in which to grow improved grasses and many feed crops.

At present the tick infested cattle find abundant feed and thrive from the middle of March until the middle of December and often later. It is really only during January and February that stock cattle need any help, on account of the colder weather, the dormant state of the grass and its destruction at this time on large areas by fire. Winter pastures of comparatively small area, if planted in improved grasses, would cheaply provide for this short season, and return stock to the general range in fine condition. They would increase the yield of calves and prevent their becoming "stunted," which is one cause of slow growth resulting in small cattle of poor quality. In addition to the various kinds of wild grass, growing on uncleared woodland or unbroken prairie, all cultivated lands produce the second year without seeding, either crab grass (the



Native Bull on S. H. Galtskill's Farm at McIntosh, Marion County

most common), crow-foot or blanket grass. All of these in season make good pastures and the first two make good hay.

Many other varieties can be grown successfully and full information concerning them is furnished by the Department of Agriculture at Washington, D. C., or by the Experiment Station at Gainesville, Florida, by P. H. Rolfs, director. Before passing this subject it may be well to say that Bermuda grass and its twin sister, St. Lucie grass, grow luxuriantly during nine or ten months and in mild winters all the year, and furnish continuous pasture. Rhodes grass, from the limited experiments made, promises a wonderful hay grass for the summer months and extra fine pasture during the entire winter, at least as far north as the twenty-ninth parallel. During the last winter it grew luxuriantly through the entire winter without turning brown once.

Improved Breeding

WITH tick eradication, which is imminent and bound to come, and even in advance of it, improved cattle is the next or possibly the first step in the production of prime beef. To say that to raise good beef and get best prices from our scrub or "Florida knot-head" cattle is out the question, would be only the simple truth. The proof is easy: Last year stock men bragged about getting \$28.00 to \$30.00 for four-year-old steers, while Hon. C. A. Carson, of Kissimmee, sold a half-breed Polled Angus two-



Half Breed Yearling Holstein Bull. Bred and Owned by A. Snellgrove near St. Augustine, St. Johns County

[The mother of this animal was a native cow and his sire the pure-bred Holstein shown in this booklet]

year-old steer right off the range for \$55.50, while scrub two-year-olds averaged him less than \$20.00 to the same buyer. Mr. Z. T. Chambliss, of Ocala, sold a two-year-old grade Shorthorn weighing 1,145 pounds at 6 cents, netting \$68.70—more than three times what Mr. Carson's two-year-old scrubs brought. Mr. Carson sold his half-breed Angus steer, saw the advantage and bought fifty pure-bred bulls of the same stock.

The improved beef breeds, Aberdeen Angus, Hereford and Shorthorn, all do well and half-breeds show wonderful improvement over the scrubs. It seems hardly necessary to emphasize this point further than to say it is altogether feasible and will be profitable to raise pure-bred cattle to supply the demand that is already here for blooded stock for breeding purposes. This is a most inviting field, full of interest and certain of big profits. There is no risk in it if cattle are immune from tick fever.

The writer had a small herd of Jerseys on the St. Johns prairie for years and his bull did service the entire year without feed or shelter. Mr. Sistrunk, of Ocala, has a herd composed of full-blood Angus cattle, half-breeds and scrubs to be bred up. This herd inspected June first, running at large on his splendid estate on the Ocklawaha river, on prairie and hammock land, showed some ticks, but were handsome notwithstanding. The remarkable and interesting fact is that the pure-bred cattle were in better flesh and sleeker and



Registered Shorthorn Bull, Duke of Niagara, 208555—weight 1,600 pounds. Owned by S. H. Gaitskill, of McIntosh, Marion County

apparently thriftier than the half-breeds and the half-breeds in much better condition than the scrubs. This condition was so obvious as to be frequently brought to notice and commented on by the gentlemen of the inspecting party.

Feed for Finishing Beef

IN the writer's opinion silos will not be found necessary or by comparison profitable in that part of Florida under discussion.

Not because silage cannot be grown cheaply, for it can, but because an abundance of green stuff can be cut from the fields or the cattle can gather it for themselves all the year. As far north as Ocala the method followed by Mr. Z. T. Chambliss would be hard to improve on. For finishing beef he plants corn and velvet beans in alternate rows and cultivates until the beans cover the ground, running over the corn. In December, when the pastures begin to fail, his steers are turned onto the beans and corn with such good results that last spring a two-year-old half-breed Shorthorn steer weighed 1,145 pounds.

We shall possibly beat this, but cost of feed and feeding considered, I hardly expect to live to see a better plan or better results. All the millets as well as Japanese cane make large yields and can be fed green or from silos. Kaffir corn makes large crops of fodder and grain and stays green all winter. All root crops, including the



Three-Year-Old Thoroughbred Holstein Bull on A. Snellgrove's Dairy Farm near St. Augustine, St. Johns County—Brought to Florida When Three Months Old

“dasheen,” make large yields, and where cattle were to be fed, especially dairy cattle, the writer planted mangel wurzel, sugar beets and carrots in October when the cost of cultivation was slight and obtained phenomenal yields, which were fed fresh with good results.

Summing Up

THE cattle business in Florida is universally profitable in spite of conditions that in a colder climate cattle would not be able to withstand. Briefly, we find tick infested, scrub cattle, degenerate from inbreeding, running at large on prairies, which are being damaged by annual fires, often at the wrong season of the year; driven at will by any owner of one cow who drives many to get one—harassed and often dogged to their injury.

Under these conditions the four-year-old steer is worth about \$25.00. With improved conditions the two-year-old brings more than \$50.00. This is not theory, but as quoted in the foregoing, it has been done. It only requires enclosed and protected pastures, free from ticks, thoroughbred bulls at the head of the herd, improved winter pastures held in reserve to bridge over the short winter, and with cheap feed crops grown on the ranch to finish the beef, the world is our market.

Today these lands and this business offer the most certain profits imaginable. The investment in this land alone is most alluring, but coupled with the beef business is doubly attractive.



Grade Shorthorn Cows on S. H. Gaitskill's Farm at McIntosh, Marion County

Success Follows Proper Methods in Improving Breeds

IN the following letter from S. H. Gaitskill, a successful raiser of beef cattle at McIntosh, Florida, it is pointed out that the grade or thoroughbred beef bull cannot give as good service as might be otherwise expected if he is obliged to rustle his sustenance on the range. Mr. Gaitskill has observed in his experience of several years that the sire of the herd should not only have good care but that breeding should be done systematically. Read what he says:

McIntosh, Florida, June 26th, 1914.

Mr. J. E. Ingraham, Vice-President,
Florida East Coast Railway Company,
St. Augustine, Florida.

Dear Sir:

In response to your letter of June 24th, I will simply write you something of my experience and my opinion as to the future of the cattle industry in Florida. Should you find anything that you can use, you can condense and cut out and use such parts of my letter as you may consider of value.



Bermuda Grass at Melbourne, Brevard County

I have now been breeding and fattening cattle in Florida for ten years. I started with the native cow and used Shorthorn bulls. Now I have cattle that would not disgrace the blue grass pastures of Kentucky.

I have tried hard to get Florida cattlemen to use better beef blood in breeding, but it is up-hill work. Some have not been uniformly successful for two reasons: First, the beef bull is not as active as the Florida native, and when turned out on the range, the native bull sires the greatest percentage of the calves. The large beef bulls should never be put on the range with other bulls, if a reasonable crop of calves is expected that will show the blood of the beef bull.

The second fault found with the better bred bulls when put on the range is that no thought is taken as to his size and the amount of feed that he must consume to maintain that size and make growth. A large bull on a sparse range will take a good part of his time to gather enough feed to maintain his size and produce growth, so he has no time to give attention to his "harem". The result, if he spends the greater part of his time with the cows, is that he does not get enough to eat and consequently he is condemned by the Florida cattleman.

In time this will change as the demand for cattle increases, and with this increased demand for cattle will be a demand for better cattle, and better cattle can easily be supplied when pastures are fenced and the native bulls kept out.



A Leon County Dairy Herd of Jerseys on the Robert Bradford Farm

By taking some care of the bulls we can easily arrange for the calves to be dropped in December, January, February and March. That means that some time in August we can put our bulls in a pasture to themselves and keep them away from the cows until some time in March, and see that the bulls are kept in good, strong vigorous condition through the winter.

If pasture gets short, give your cattle other feed. Every man that has a bunch of cows should have a dipping vat and a silo. Each is a money-maker. The vat will keep the ticks down. No man ever got a profit from feeding ticks and that is what he does when he allows his cows to become infested with the ticks, and heavy infestation of ticks on a calf in the spring will give him such a stunt as he will never outgrow and develop as he should.

A dipping vat can be made for one hundred dollars or less and it will be worth several hundred dollars each year until the range is free of ticks. The silo will furnish feed at a time when feed is scarce. We have quite a number of crops that make good silage. Corn is the best. Japanese cane and sorghum are excellent, and there is no part of the state where cattle can be handled successfully that will not grow heavy crops of sorghum and Japanese cane.

The dipping vat is to stop the feeding of ticks and the silo to aid at times of short pasture will lessen the death toll of the herd wonderfully. It does not take much silage added to the feed they would



Field of Pearl Millet near Fellsmere, St. Lucie County

otherwise get to bring the bulls out in the spring in strong, vigorous condition, and we should cut out the weak cows and calves and give them a little silage which will make a remarkable difference in their growth.

I am sure that every hundred-ton silo will carry over a hundred head of cattle through the winter in fine shape and would be of great help to two hundred head. I am quite satisfied with a little extra attention given our cattle, real prosperity is dawning for the Florida cattleman who has a good range.

I think the Kissimmee country, the Myaka River country and the Alachua lake country form the best range sections. The Kissimmee valley has a fine cattle range, good in summer, and furnishes fair maintenance grazing through almost every winter.

The question of good bulls is a serious one. My experience of bringing good bulls from the North makes me try very hard to get a supply that have been raised below the quarantine line. For breeding to native cows I would as soon have a high grade, if a good individual, as a pure-bred bull, but there are a great many men who mistake an inferior animal, if he is registered, when registration is of no value if breeding to cows that cannot be registered.

I have had numerous calls for bulls ready for service, but I make a practice of "steering" my calves every fall, no matter how good they are, as I get well paid for all of my steers as yearlings. Velvet



Jersey Calves on Robt. Bradford Dairy Farm in Leon County

beans and a little silage make my calves prime baby beef about March, when they are from twelve to fourteen months old, and I find this more profitable than saving for bulls, and the sooner the cow man of Florida realizes that he must buy his bulls as calves, the sooner he will have some good bulls to put on his range.

I castrate from ten to twenty-five calves every fall that would be of immeasurable value to the cattle interests of the state if they were kept as bulls and turned on the range. My calves are 7-8 to 15-16 pure bred, with a few that are pure bred. I feel that I am safe in saying, and I form my opinion from my own experience, that there is no state in the Union that can produce beef cheaper than Florida; but I believe our greatest profit is to come from taking better care of our calves, keeping them vigorous and growthy, and selling our yearlings to go to corn belt feed lots of the North. This can easily be accomplished by using better beef breeds, cutting the milk breeds, the Jerseys and Holsteins, entirely out of our beef cattle herds and taking a little better care of our stock.

The native Florida cow is a better beef animal than any of the milk breeds if she is given enough feed to allow her to fully develop. By feed I do not mean feed that has been gathered for her—she will get a good maintenance ration if she is given good range. We have only to fence our ranges and not overstock them. There is no reason why we should not get as good or better prices for our cattle than Texas, as our freight rates to the corn belt feed lots should be less



Oats at Vero, St. Lucie County

than from Texas, and I am sure we can grow the animal at as little cost as the Texan can.

Now, Mr. Ingraham, I hardly think this is just what you want, but you can use just such parts of it as will suit your purpose. I have some pictures of natives, some of Shorthorn grades and of a pure-bred Shorthorn bull and I will gladly let you have any of them you may want. We have no range country over this way like the Kissimmee valley country, but should you have anyone who would like to see what has been accomplished, send him to me and I will show him what is possible in the cattle producing line.

Very truly,

S. H. GAITSKILL.

Greatest Success Results from Improved Breeding

HON. C. A. Carson, of Kissimmee, one of the largest cattle owners in Florida, says that the cattle industry in this state is prospering. In his letter on the following pages Mr. Carson also calls attention to sheep raising in Florida as an attractive and profitable business:



Part of Dairy Herd of Jerseys on Florida Vegetable Company's Dairy Farm near Hastings, St. Johns County

Kissimmee, Florida, July 3rd, 1914.

Mr. A. L. Hunt,
Kenansville, Fla.

Dear Sir:

Replying to your request for information about the cattle and sheep industry in Osceola county, in what is known as the Kissimmee prairie country, beg to say that for a great many years this has been recognized as the best adapted for purposes of cattle and sheep raising of any part of Florida.

During the period of twenty or twenty-five years ago such men as E. O. Morgan, William Alderman, William Shiver, Readding Parker, R. B. Savage, A. E. Godwin, Walker Bros., and others made much money raising native cattle on native grasses. At that time no attention whatever was paid to blooded cattle, and there were no pastures enclosed, as it was not necessary. The range was all open, free to be used by anyone who had a few cattle. Inasmuch as the climate was so equable and uniform the native grasses would sustain cattle splendidly throughout the year, winter as well as summer, therefore it was not necessary to ever buy a pound of feed for these cattle. The only expense was in rounding up, marking and branding the calves in the spring, and shipping beef wherever it was wanted.



Cutting Corn for Silo on Hastings Cold Storage Company's Farm, St. Johns County

Since that period some portions of the range have been bought by cattle owners and fenced for their own use. In nearly all these cases some attention is now being paid to the introduction of good blood. This feature of the business, however, is practically in its infancy, but wherever tried by the introduction of thoroughbred bulls the shipped cattle have been a decided success. The principal strains introduced are the Hereford and the Aberdeen Angus, or as familiarly called the Black Polled Angus. The latter seem to be the favorite by the majority of those who have tried them and watched the outcome of the experiments. The most noted example of the Black Polled Angus is the herd now owned by the Carson Cattle Company, of Camp Hammock, on Lake Kissimmee. They introduced a carload of this breed of bulls and heifers last fall.

Probably twenty years ago large herds of cattle could be bought at \$5.00 per head. Now the regular price, including cows, calves, two- and three-year-olds and yearlings, is \$15.00 per head, with the result that cattle owners today are prospering very much more than they did some twenty years ago.

During the past two years this part of the country, with Kissimmee as headquarters for shipping operations, has become noted for its large supply of cattle, with the result that during the last fifteen months there have been shipped from this point fully ten thousand head of cattle. Shipments have been made to Kansas, Oklahoma, Wyoming, Missouri, West Virginia, Mississippi, Ohio and Texas.



Jersey Calves at Florida Vegetable Company's Dairy Farm, near Hastings,
St. Johns County

Some of the principal owners of cattle now in this section are Lesley & Bass, Rull Bass, Henry T. Bass, John R. Bronson, Ed. Whaley, Carson Cattle Company, Geo. C. Bronson, A. S. Drawdy and Ordia Bass, of Kissimmee, Florida; A. F. Bass, of St. Cloud, Florida; W. R. Godwin, Whittier, Florida; A. E. Godwin, Rosalie, Florida; Robert Alderman, W. F. Walker, J. H. Walker, W. P. Underhill, W. E. Underhill, J. S. Underhill, and H. J. Moody, of Bassenger, Florida; Geo. W. Hopkins, of Melbourne, Florida. The above is a partial list of the owners of the larger herds; hundreds of smaller owners occupy the same territory.

Sheep Raising

My attention was first called to the profits to be had from raising sheep when my father-in-law, the late Hon. John M. Bryan, bought a very small flock of sheep a number of years ago, for which he paid \$350.00. He owned these sheep for about twenty months, in the meantime selling enough wool and mutton to pay back the original cost; then he sold his stock for \$1,200.00, thus making a clear profit of \$1,200.00 on an investment of \$350.00 in twenty months. Since that time I have observed the industry quite carefully, and beg to say that so far as I can get the information, sheep and cattle both are more free from disease in Florida than in almost any other state, with the exception of the tick, which is common to all the southern country. They require very little attention so far as disease is concerned.



Japanese Cane at Fellsmere, St. Lucie County

I have owned as many as eight thousand to ten thousand head of sheep at a time, and have never found it necessary to dip for scab or to treat for foot rot.

The statement as to better breeds of cattle made above applies equally to better breeds of sheep. That is, but little attention has been paid to the breed until within the last two or three years. They are largely on the open range, but yield very much better results when cared for carefully as in the western states.

The principal enemies of sheep on the range are dogs, hogs, buzzards, and wild cats. The injury from these enemies is possibly about in the order in which they are named, but it will be readily seen that an attendant could minimize the danger from any of them.

The clip from sheep of the ordinary grade will average from two and one-half to three pounds per head, of a really good grade of wool. Better breeds would produce a heavier fleece, but I do not believe the fleece in Florida on any breed would be quite as heavy as it would be in a colder climate. The animal does not need as much protection. This is clearly shown on the coat of wild fur-bearing animals, such as the otter, the beaver, etc.

The local markets in Florida easily consume all the mutton now available. There is always a ready sale for wool. As the ewes lamb in December and January, Florida is the finest place in the United States to furnish spring lamb for market.



A Good Yield of Crab Grass in St. Johns County

Some of the principal owners of sheep in this section are Ordia Bass, Henry T. Bass, R. D. Waring, Ed. Whaley, J. O. Ward, and Carson Cattle Company.

Notwithstanding that the raising of sheep is extremely profitable, the industry has not been as largely developed as it is capable of being, by a great deal.

The number of sheep in the territory mentioned probably does exceed twenty thousand, while the cattle in the same territory will probably run from one hundred and fifty thousand to two hundred thousand.

Possibilities

There are so many feedstuffs adapted to cattle and sheep that can be easily and cheaply produced. It is easy to see that when better breeds of both cattle and sheep are introduced and more modern methods for caring for them are in operation, the profits to be derived will be increased many fold, and as I see it, the Kissimmee valley section of Florida will furnish beef for many thousands of people in this and adjoining states. So far as I know there is no section of this state that can equal this valley for stock raising purposes.

Yours truly,

C. A. CARSON.

Would Cross Herefords and Native Cattle

MR. U. J. WHITE, of St. Augustine, an authority on livestock raising, who is mentioned elsewhere in this booklet, believes that a cross between pure-bred Hereford cattle and native stock, to be followed by still more improvement in the breed, will result in the best beef cattle for Florida. In the case of hogs he favors beginning by crossing the native Florida hog with the Duroc-Jersey. He believes in breeding up to a high standard to realize the greatest profits.

Mr. White says that rape is the great feed crop for hogs—he has seen Florida hogs well fattened for market with rape as the principal feed and no grain used whatever. He considers that at the present time Florida offers an unusual opportunity to the livestock farmer by reason of the vast acreage of cut-over and turpintined lands which can be purchased for low prices and made to produce a great quantity and variety of forage crops and pasture grasses at a minimum expense.

Slaughtering Plants Will Come

IT is believed by many that the day is not far distant when some one or more of the big western packers will establish slaughtering plants in Florida. About a year ago what might be termed the first step in that direction was taken when stockyards were established in Jacksonville. It is certain that the big packers are paying close attention to Florida in the belief that it will become one of the greatest beef, pork and mutton producing states in the Union in the near future. Not long ago the writer was informed by a representative of one of the leading packers in the United States that his company as well as two or three others had livestock buyers on duty in Florida. He said further: "Until there is an up-to-date slaughtering plant built in Jacksonville, the stock raisers of Florida will have to compete with the western markets and ship their stock. If Florida farmers should go into the stock raising business on a large scale they would have to compete with the other sections of the country in marketing their stock, but we see no reason why they could not do this successfully, as it is our opinion stock can be raised as cheaply in Florida as anywhere else in the country. Our livestock raisers are competing successfully on cattle, as is evidenced by western packers sending buyers here and buying and shipping, and we know of no reason why our livestock raisers could not raise more hogs and compete with the rest of the country."



A TRAINLOAD OF SOUTH FLORIDA



PENS OF NATIVE FLORIDA



CATTLE FOR KANSAS CITY PACKERS



CATTLE FOR NORTHERN MARKETS



Dairy Plant of Florida Vegetable Company at Hastings, St. Johns County

Dairying Profitable in Florida

DURING the year from July 1st, 1911, to July 1st, 1912, 39,621 milch cows in Florida produced 8,131,761 gallons of milk valued at \$2,166,018.00. During the same period 1,133,887 pounds of butter, valued at \$351,964.00, was made in the state. This is in line with the showing made in the dairy business by almost all southern states and there is no reasonable excuse for the comparatively small number of cows and the limited production of milk and butter as far as Florida is concerned when its wonderful feed crops and climatic resources are considered.

Every year more than a million dollars is sent to other states to pay for needed dairy products when it is a matter of common knowledge among Florida dairymen that conditions are not only favorable to the production of all the milk and cream used in the state but that with proper effort Florida can produce immense quantities for export. To bring about this desirable change Florida needs thousands of intelligent dairy farmers who will make the most of the unparalleled advantages that the state has to offer them.

In the first place, the protein feeds necessary to feed dairy stock can be grown in Florida in great profusion and in great variety. Cow-pea hay, analyzing sixteen per cent. protein, is equal pound for pound to the best bran. Velvet bean hay and beggarweed are also high in protein content. In carbohydrate feeds we have an abun-



Interior Dairy Barn of Florida Vegetable Company near Hastings, St. Johns County

dance in Japanese cane, sweet potatoes, cassava and others. There are any number of other feed crops and pasture grasses in addition to corn silage that can be produced in quantities in nearly all parts of the state.

The extra twenty-five per cent. of feed during the winter months to keep up the natural heat of the animals is not needed in Florida. It is also a fact that dairy cattle are bothered comparatively little by flies in Florida for the reason that this pest, so common in the north, is extremely scarce here during the greater part of the year, and never anything like as bad as the writer has seen it in the famous corn belt of the United States. It is true Florida has the tick to deal with, but it is not difficult of control if cattle are well salted and well groomed as dairy stock should be.

Of dairy cattle breeds for Florida the Jersey seems to be the most popular, though some Florida dairymen are getting excellent results from Holsteins. They are all agreed that high grade cows of either breed are by far the most profitable. Concerning breeds C. K. McQuarrie, of the Florida State Experiment Station at Gainesville, Florida, says:

"Every dairyman has his own favorite breed, but in Florida the Jersey seems to be the most popular. There are several reasons for this; but the principal one that concerns the man that makes butter is that the fat globules in the Jersey cow's milk are larger than in the milk of the other breeds. The butter made from the Jersey

cow's milk stands up better in warm weather, and will not turn oily as soon as that from other breeds, while its texture is good all the way through. From personal experience I prefer a high-grade Jersey, about seven-eighths Jersey and one-eighth native. This grade of cow will give you a hardy animal that is a good forager when turned to pasture or on the range. Its milking capacity will, in most cases, equal that of the pure stock, and as a general rule it will produce milk at less cost than the pure Jersey. Such animals do not require the same care and pampering as the thoroughbred, and cold and wet spells of weather do not affect their milk production so much. Any one wishing to get good results and build up a herd of good animals can easily do so by keeping a full blood Jersey bull, and so grading up his herd. This bull should be changed every four or five years to prevent in-breeding. Every dairyman should raise his own cows by selecting the best of his heifer calves. By doing this he can build up a herd of a certain type, and can select the best milkers as they develop their milking qualities, while those not coming up to the mark can be sold off."

In a recent issue The Florida Farmer and Homeseeker says:

"It is safe to say that no greater opportunity exists in Florida today than that which is open to the dairy farmer. The demand for dairy products in almost every section of the state far exceeds the supply during every month in the year and the result is good prices to the producer all the time. Prices vary according to the extent of the demand. During the summer good dairy butter is sometimes sold for as low as thirty-five cents per pound while the price runs to fifty cents and above during the winter season. Fresh milk brings from ten to twenty cents per quart; cream, thirty to forty cents per pint, and there is invariably a market for buttermilk at the soda fountains and in private families.

"There is no lack of feed for the Florida dairy herd that can be produced right on the farm. In many sections of the state corn has become one of the standard crops, while cowpeas and many other forage crops and grasses can be grown in quantities if the proper effort is put forth.

"The fertility of the dairy farm can be maintained at a minimum expense because there is comparatively little taken from its soil that is not put back in the shape of manure. It is said that eleven hundred pounds of cow produces each day from forty to fifty pounds of fresh manure, and twenty to thirty-five pounds of urine. In one year this amounts to 15,300 to 18,200 pounds of fresh manure and 7,000 to 12,000 pounds of urine. This is sufficient manure to dress an acre of potatoes to yield one hundred and seventy bushels.

If a dairy is operated almost entirely for the cream it produces there is a quantity of skimmed milk available for feed that means a great deal to the farmer in the economical raising of hogs and poultry."



**A Fair Sample of the Corn Florida Produces. Raised on the Farm of C. A. Dupont
at Hastings, St. Johns County**
[Average length of ears, $9\frac{1}{4}$ inches; weight of three ears, $3\frac{1}{4}$ pounds]



Bermuda Grass Lawn at T. A. Snyder's Home at Hobe Sound, Palm Beach County

Florida Pasture Grasses

By John M. Scott, Animal Industrialist, Florida Experiment Station,
Gainesville, Florida

THE title of this article would indicate that it is closely related to livestock. When we think of livestock we naturally think of pasture grasses. Without pasture there is little or no livestock produced. I mean by this that to produce livestock on an economical basis it is of prime importance to have an abundance of nutritious pasture.

We are often asked: "What is the best pasture grass?" Perhaps the man on a cow pony from the western range would answer "buffalo grass and grama grass," while the stockmen from the central states might say, "blue stem;" and the colonel from Kentucky would say, "there is nothing better than blue grass."

All, perhaps, have told the truth, and yet they do not agree as to which is the best pasture grass, for what may be the best grass in one part of the United States is sometimes worthless in other sections. We have named four good pasture grasses, yet none of these can be recommended for Florida. What, then, are best grasses for Florida?

The best grasses for Florida are Bermuda, Para, the various species of paspalum, and Guinea grass. Bermuda is a grass that has been

abused in all manner of ways; had it not been such a good grass, it would have died long since of despair. Grasses that are easily eradicated are, as a rule, injured to a considerable extent by grazing. A grass that will stand continuous tramping and daily grazing must have good staying qualities or it will soon disappear. Bermuda grass has many qualities to recommend it. It is a very nutritious grass; it starts growth early in the spring and continues until late in the fall; it is not killed by cold here in Florida; its habit of growth is such that it soon makes a good sod, which is not easily injured by stock tramping over it. It has the staying qualities that few other grasses can boast of. It is propagated from stem and root cuttings and also from seed. Perhaps the most satisfactory way of planting Bermuda is to use the stems and roots; these should be cut up into small pieces and scattered broadcast over the ground to be planted. The land can then be plowed. There is perhaps only one main objection to Bermuda grass. On thin, sandy land, stock keep it grazed close to the ground, and thus the animals are likely to get a good deal of sand, and in time become sanded. However, like other crops, it makes a better growth, and therefore furnishes more pasturage, when planted on good soil.

Para grass furnishes an abundance of good pasturage over a large portion of South Florida. It is a grass that is better adapted to the southern portion of the state than to the northern and western parts, because it is injured more or less by hard frosts. Para grass is of a much larger and ranker growth than Bermuda. It will grow in almost any class of soil. It flourishes and makes its best growth on wet, mucky land. However, it grows well and yields an abundance of good pasturage on almost any class of soil except real sandy, thirsty land, such as a "blackjack" ridge. Para grass is not only a good pasture grass, but it also makes good hay. It is propagated by planting. Like Bermuda grass, Para grass has a number of good qualities. However, it has one weak point, and that is it will be injured by hard frosts. In those sections of Florida where hard frosts are not likely to occur, Para grass will perhaps be as satisfactory a pasture grass as Bermuda. On good land it will grow to a height of five or six feet or more. When it makes such a big growth, the stems are, as a rule, hard and woody. In such cases Para grass is not of much value for pasture except when it is kept grazed close to the ground.

Here in Florida we find a large number of species of *paspalum*. A number of these furnish excellent pasturage whenever a good sod can be established. They are propagated by sowing the seed. The best of these are worthy of a trial on every farm in the state.

Guinea grass is another tall, rank growing grass that does well in the southern part of the state. Like Para grass, it is injured by hard frosts. When grown under congenial surroundings, Guinea grass produces a heavy growth of pasturage.



Para Grass at Vero, St. Lucie County

Bermuda Grass

CONCERNING this well known grass, which thrives in all parts of Florida, Bulletin No. 509 of the United States Department of Agriculture says: "Bermuda grass is the foundation of all of the best permanent pastures in the South, and in many localities is important for hay * * * This grass will seldom do much more than cover the ground the first season, but when a good sod is once formed it will last indefinitely. The yield of hay on rich lands may be as much as four tons per acre or more. * * * The feeding value of the hay is about equal to that of timothy. The planting of this grass is objected to by some on account of the difficulty of eradicating it when the field is wanted for other uses. It is difficult to kill it with the most persistent cultivation, but it is easily destroyed by any dense smothering crop, which keeps it heavily shaded." Mr. U. J. White, of St. Augustine, now retired, but formerly one of the leading farmers and livestock raisers in Florida, classes Bermuda grass with the famous Kentucky blue grass as pasture for cattle. Mr. White states that in all his experience raising beef cattle in Florida, he has never found anything to equal Bermuda grass from every standpoint. He points particularly to the fact that in ordinary seasons it furnishes good pasture throughout the entire year, it is not easily damaged by grazing and when once started it is permanent.



Rhodes Grass Pasture at Fellsmere, St. Lucie County

Rhodes Grass

ONE of the best all-purpose grasses for Florida livestock is Rhodes grass, or East Coast grass, as it was named by Mr. J. A. McGuire, of St. Augustine, who introduced it into Florida. Mr. McGuire first learned of this grass in 1910, and finally succeeded in procuring a small quantity of the seed direct from New South Wales, Australia, where it had been introduced through Cecil Rhodes from South Africa.

Concerning this grass, Mr. McGuire makes the following statement: "On April 28, 1911, I sowed four pounds of East Coast or Rhodes grass seed on one-eighth of an acre of ground, using plenty of cow manure, and took therefrom five cuttings as follows:

First cutting, June 6th, producing 280 pounds cured hay.

Second cutting, June 29th, producing 960 pounds cured hay.

Third cutting, September 2nd, producing 955 pounds cured hay.

Fourth cutting, October 6th, producing 560 pounds cured hay.

Fifth cutting, December 14th, producing 450 pounds cured hay.

"The above five cuttings were taken within eight months after planting, producing a total of 3,205 pounds of cured hay, which indicates that an acre of land cultivated in the same manner and planted in the same proportion will produce in the same time 25,760 pounds or about thirteen tons of cured hay.



Rhodes Grass Hay near Vero, St. Lucie County

"Of course this was a special test, the ground being well prepared with a liberal application of cow manure, but it is a good example of what this grass will do when forced and properly handled. Ordinarily this grass will produce, according to soil and climate, from five to six tons of hay to the acre, the number of cuttings per annum depending on the condition of the soil.

"My experiment with this grass has been very gratifying and I find that it will withstand a long spell of dry weather, as that summer here was an exceptionally dry one. It will also apparently survive and do well in the cold weather, such as we have in Florida, as the temperature here has been down to freezing point (32 degrees above zero), and it does not seem to affect it in the least. However, in Australia, where this grass is cultivated extensively, they claim that it is somewhat affected by the frost, but if not too severe, the grass will spring up again in warm weather.

"In order to handle this seed properly and obtain good results, I would recommend planting it during the first of March, as this will give it a chance to be well established before cold weather arrives. Prepare the ground the same as you would for wheat, rye or any grass seed, using a first class grass fertilizer, say about two hundred pounds to the acre, or more if the soil is very poor.

"The seed is light and fine and germinates readily with a small amount of moisture, from seven to eight pounds being sufficient to sow one acre of land. It grows to the height of three or four feet and sur-

vives long periods of drought, yielding a most nutritious fodder which is relished with sorghum, and as our experiment demonstrates, excels timothy, clover and even alfalfa."

Since Mr. McGuire introduced East Coast or Rhodes grass, the truth of his statements in the foregoing has been proven many times in various parts of Florida. Mr. McGuire states that he has found that it grows better in a soil with an abundance of lime in its makeup. This led him to have one of the fertilizer factories make up a special mixture for it, consisting of one-third lime and two-thirds grass fertilizer.

Briefly, a field of Rhodes grass properly sown and cared for, furnishes the best of pasture or cured hay for horses and cattle. It compares very favorably in nutrition with timothy and alfalfa. Mr. McGuire is of the opinion that by far the best results are obtained from using imported seed instead of domestic.

Other Grasses

CRAB grass is of considerable importance as a volunteer hay crop especially on sandy soils. It makes its growth late in the season, on lands from which early crops, like melons or potatoes, have been taken, and makes a good growth in fields of cowpeas, where it adds largely to the yield of hay. It is said to be somewhat difficult to cure, but when properly handled makes a good quality of hay. It is always a volunteer crop and need never be sown.

Natal grass, from South Africa, is much like crab grass in habit of growth, but where the soil is very sandy it makes a heavier yield of better hay. It has become thoroughly established in parts of Florida. It will not stand heavy frosts, but from Central Florida southward it becomes perennial and is used some for permanent meadows. Farther north it is an annual, making a volunteer growth in fields from which early crops have been gathered and often producing a heavy growth in corn fields after cultivation ceases.

Para grass and Guinea grass, both common to part of Florida, are dwelt upon on another page in this booklet.

Florida Forage Crops

PERHAPS the best forage crops for Florida are Japanese cane, sorghum, corn, velvet beans, Chinese beans, Yokohama beans, cowpeas, and beggarweed. Japanese cane is propagated by cuttings. It can be planted any time from November to April. It requires about three thousand whole canes to plant an acre. Before planting, cut the canes into pieces about one and a half feet long. Plant in rows from six to eight feet apart, and drop the canes in a double line in the row. Cover the canes from three to four inches deep. Give good cultivation from early spring until midsummer.



Velvet Beans near Ft. Pierce, St. Lucie County

Sorghum is a good forage crop, but will not produce as heavy a yield per acre as will Japanese cane. It may be planted any time from early in March until August first. The early planting will produce two crops during the year. When planted as late as July, only one crop can be grown. There are quite a number of varieties of sorghum, all of which do well here. The best yielders are Goose-neck, Sumac, and Orange. The Early Amber is good, but the only advantage it has over any of the other varieties is that it matures two or three weeks earlier. Plant in rows three and one-half or four feet apart. One bushel of seed will plant five or six acres.

Corn can be planted any time from February to April 15. Plant in rows three and a half or four feet apart, and about two feet apart in the row. If it is to be used entirely as a forage crop, it should be much closer in the row.

A good fertilizer formula for general forage crops would be about as follows:

Ammonia.....	3 per cent
Phosphoric acid.....	5 per cent
Potash.....	4 per cent

Apply at the rate of 300 to 600 pounds per acre.

Velvet beans and Chinese velvet beans should be planted in rows six feet apart, with a row of corn or sorghum between each row of beans. Plant the beans any time from the last of February until May. One bushel of seed will plant from four to five acres.

Yokohama beans mature in about one hundred and twenty days, and hence can be planted at almost any time from early spring until the last of June. They do not make as rank a growth as do the velvet and Chinese, and hence can be planted in rows about two and a half feet apart, and from eight to ten inches in the row.

Cowpeas, if for hay, should not be planted until July. Planted at that time they will be ready to harvest after the fall rains. Plant in rows two and a half feet apart and three to six inches apart in the row.

The beans and cowpeas mentioned above will not require fertilizing to produce a good crop.

A favorite feed for cattle in many parts of Florida is German millet. It yields heavily and grows rapidly. Near Malabar, Florida, on the central East Coast, a field of German millet grew to a height of four feet six weeks after sowing. The crop was then cut and six weeks later another crop was ready to harvest. This was the experience of Mr. W. Huebner, of Malabar, and the millet was grown on sandy soil without the aid of fertilizer.

Corn and Japanese cane take the first rank in Florida as ensilage crops. Every one knows the value of corn in this respect. Japanese cane makes good silage. It keeps well, is relished by cattle, and the yield that can be secured makes it one of the most economical crops that the Florida farmer can grow for silage. It is also a valuable crop for dry winter forage. It is easy to cure and the loss in storage is small. In a recent test at the Florida Experiment Station at Gainesville, Japanese cane was used as roughage in feeding for beef production. In this test the following feeds, per 1,000 pounds live weight, were fed: corn 12.50; velvet beans in the pod, 18.75; sweet potatoes, 20.8; and Japanese cane, 12.50 pounds. During a period of sixty days the steers made a daily average gain per 1,000 pounds live weight of 6.5 pounds, at a cost of four cents per pound of gain. Japanese cane is a crop suited to a variety of soils. Good hammock land will no doubt produce the heaviest yields. But even the high pine lands will give good results when properly fertilized. On swampy muck land Japanese cane will make a fairly good growth. On such land the growth will be greatly increased by an application of lime (ground limestone or burnt lime).

The growing of a high grade of corn in Florida with substantial yields per acre, has long since ceased to be an experiment. Experts state that any soil which will produce a good crop of cotton will also produce good corn. At the present time excellent corn crops are produced in many counties in the northern half of Florida.

The common practice in the famous Hastings Irish potato district of St. Johns county is to plant potatoes with commercial fertilizer in January. Early in the spring, corn follows the potatoes in the same fields and not a bit of additional fertilizer is used. Cowpeas are planted with the corn two or three months later, and if the corn



Peanuts With Corn Adjoining Near Hastings, St. Johns County

and cowpeas are cut for silage in August there is ample time for some other crop on the same land ahead of the next January planting of potatoes. At the present time, September, 1914, there are between four and five thousand acres of corn in the Hastings district alone that it is said will yield from forty to fifty bushels per acre—the second crop of the year and grown without fertilizer. The stand of this corn is fine. The ears are of good size and are well filled with large uniform kernels. What is being done in St. Johns county is duplicated in many other counties in the state, especially in the northern half. Putnam, Leon, Seminole, Alachua and Marion counties grow quantities of excellent corn as do also many other counties in Florida.

Cowpeas, soy beans, beggarweed, rape, velvet beans, kudzu, cassava, chufas, and many kinds of vetch are all valuable Florida forage crops and grow readily in almost all parts of the state. All kinds of sorghums, Kaffir corn and broom corn give a very satisfactory yield and furnish good forage for Florida livestock.

The Florida beggarweed is a valuable forage plant that grows as a volunteer in old fields with a light, sandy soil. It makes its growth late in the season and sometimes reaches a height of from five to seven feet. It is used for hay, grazing and silage and if cut at the right time and properly cured it makes an excellent hay. Although not sufficiently bulky to use alone in filling a silo, a little of it mixed with other silage crops greatly adds to the value of the silage. It is said to be more fattening than alfalfa or cowpeas.



Duroc-Jersey Sow and Pigs near Hastings, St. Johns County

Money in Florida Hogs

THERE is no doubt in the minds of those who are engaged in that pursuit but that there are excellent profits awaiting the Florida farmer who raises hogs for market. The local demand for fresh pork is strong at all times of the year and particularly during the fall, winter and spring, when it brings very attractive prices. The day of the "razor-back" in Florida is past. Florida's leading livestock men have adopted for their slogan "Improve the breeds," and with the many advantages that the state offers in the way of cheap feed crops, mild climate, good local markets, etc., it seems that the business of raising hogs in this state cannot result otherwise than profitably to those who engage in it.

One of the best forage crops in Florida for hogs is Dwarf Essex Rape. It has an unusually high feeding value and is used to good advantage in fattening hogs for market. Some stockmen have had great success with rape alone in this respect, but experiments have shown that it gives best results when combined with grain. Another excellent green feed for Florida hogs is cowpeas. This is perhaps Florida's leading legume and it is readily grown in all parts of the state.

The greatest fattener for hogs that is grown in Florida is the peanut, which yields exceptionally well in grey sandy soils with an abun-



Hampshire Pigs at Vero, St. Lucie County

dance of lime. At the experiment stations in various parts of the country it has been shown that whenever the amount of peanuts in the rations for hogs was increased there has been a noticeable daily gain in the weight of the animals. To feed peanuts without the vines and roots is too expensive to be practicable, a common practice being to turn the hogs into the peanut fields after harvesting and let them get whatever is left. It is not considered good practice to limit feeding for market to peanuts alone, as animals so fed do not yield a desirable quality of meat or lard and it is therefore essential that some grain and other feeds should be included.

It is hard to name definitely the best breed of hogs for Florida, though two well known breeds seem to be the most popular. They are the Duroc-Jersey and the Berkshire. Chester Whites, Hampshires, and Poland Chinas are in evidence here and there and seem to do well, but authorities seem to favor the Duroc-Jersey for the reason that it is exceedingly well adapted to the South. It is a more prolific breed than either the Berkshire or the Poland China. Duroc-Jersey sows are also better milkers and mothers than the Berkshires or Poland Chinas. The Duroc-Jersey is also one of the best grazers that we have; they are strong and active and can graze over large areas. The Berkshires are also admirably suited to Florida. They are good rustlers, fatten at almost any age, and cross well with the inferior hogs of the country. The quality of the meat is good also.

While they are relatively strong in breeding qualities, still they are



Chester White Hogs on A. Snellgrove's Farm near St. Augustine, St. Johns County

not as good breeders as the Duroc-Jerseys. They are, however, more prolific than the Poland Chinas.

The September number of the Florida Farmer and Homeseeker says:

"Upon two or three occasions lately this magazine has been asked to name the best breed of hogs to raise in Florida. There has been considerable discussion of this question in the past, some favoring one breed and some another. Certain hog raisers claim that a cross between the Duroc-Jersey or the Berkshire and the native hog is the best under existing conditions.

"It appears, however, to the breeder who gives the matter proper consideration, that a pure-bred hog of some one variety should excel in Florida as is the case in other states. In such great hog raising states as Iowa the Poland China is strong largely because that breed is well adapted to the climate, feed and other conditions.

"So far as the writer has observed the Duroc-Jersey is the most profitable hog for the South and while there may be some advantage in crossing this breed with the native hog in sections where the animals must range over considerable territory for their feed because of lack of sufficient good forage grown for them, the pure-bred hog must eventually triumph.

"That the Duroc-Jersey is a good hog is quite generally admitted and there is no question as to his being adapted to warm climates. Perhaps the following description of his good qualities by Geo. W.

Bolds, of Louisiana, in *Modern Farming*, will serve to give our readers a clear idea of why many experienced breeders think he is the best hog for Florida:

"I have tried the pure-bred hog business with the Berkshire, Poland Chinas, Yorkshires and Duroc-Jerseys, and had to admit from ex-



Cowpea Hay in Leon County

perience that the Duroc-Jersey was the hog for me to stay with at all times, as he is the hog for the poor man as well as the rich. He is the hog that will take the place of cane and cotton for the South; he is the hog you can keep any place with a 26-inch high fence; he is a hog that is very gentle and can be handled by children; he is the hog that will farrow and raise more good pigs than any other breed known; he is the hog that is considered the best rustler and stays in good condition on the smallest amount of feed; he is the hog that can stand the heat of the Southern climate and not have a pool to swim in to survive; he is the handy hog that will stand more punishment than any other. You can fatten him at any age, and you can grow him in six to seven months, with your native grasses here, so he will command a frame to take on fat at the rate of two and one-half to three pounds per day, and at nine months old should weigh two hundred and seventy-five to three hundred pounds. He is the hog the butcher wants; the hog the packer wants; and the hog the farmer and feeder wants, as he will bring the quickest returns for the feed he consumes and the best profit.

"If the Duroc-Jersey hog is not the most practical hog for all, the majority of the farmers in the United States are surely very ignorant regarding the most profitable breed to raise, as statistics show us that over sixty per cent. of all hogs marketed in the United States, at our different markets, are either Duroc-Jersey or crossed such that the Duroc blood predominates.

"You can get as fine and delicious cuts from a Duroc hog as you can any other, and besides that is not all, for the whole hog is of the very best as a pork proposition. You can get your bacon with your three streaks of lean and you can get your choice hams and shoulders, and after all this you will get more pounds of lard to the weight than any other hog known. He is not the hog of few good qualities—every inch of him can be worked to the best results."

Wool and Mutton a Source of Profit

IT is not necessary to look up statistics to be convinced of the fact that the consumption of mutton per capita, in the United States, is steadily increasing every year and it is also true that the demand for wool will increase more rapidly from year to year than it is produced. It follows, therefore, that the business of sheep raising under proper management should be profitable wherever it is adapted to climate and feed crops and is afforded an accessible market. Florida possesses these requirements. In fact, she has sufficient resources to produce hundreds of thousands of dollars' worth of mutton and wool profitably. This is the opinion of experienced sheep raisers, who are meeting with good success in the business in this state at the present time, as well as some of the foremost authorities on the subject outside of Florida.



Flock of Sheep in Volusia County

In countries where economy in farm management has been studied a long time, the sheep is considered necessary in utilizing vegetation on such waste lands as are not wet or marshy. But the sheep can hold its place on high-priced land as a meat producer alone. First, the lambs mature very rapidly, being marketable at four months of age or later, according to breeding and feeding. This is an economy, because a larger proportion of the total feed goes into increase of weight than in slower growing animals. Second, sheep consume a greater variety of plants than do other animals. Many of such plants are detrimental to pastures and would otherwise require hand labor to hold them in check. Third, grain waste in harvesting can be entirely recovered by sheep. These facts prompt some farmers to claim that the summer food of sheep costs nothing, because what they consume would otherwise bring no returns.

Compared with hogs, the sheep has an advantage in the wider variety of materials it consumes. Being a ruminant it makes its gain with a minimum of grain and expensive concentrates. Cowpeas, rape, soy beans, vetches, and any number of pasture grasses that thrive in Florida furnish the best of feed for sheep. Not long ago



Ewe and Lamb on Pine Land near Tallahassee, Leon County

W. J. Clarke, editor of the Shepherd's Journal, of Chicago, spent some time in Florida investigating its possibilities as a sheep raising state. Among other things, Mr. Clarke says:

"During my itinerary I traveled, possibly hundreds of miles, through lands in the vicinity of Tallahassee, and other cities, and have seen thousands of acres of land which I feel sure would make splendid sheep ranches. I know from observation that such crops as are conducive to the raising of high class sheep can be raised almost anywhere on these lands * * * Were I to locate in Florida with the necessary capital and the desire to make from six to fifteen per cent. on my operations and fifty to one hundred in due course of time on my original investment by the sale of my land, my ambition would be to secure a large tract of land with the ultimate view of its becoming a large, well-pastured sheep ranch, which I would use for that purpose until the land was badly wanted for pecan nuts or fruit growing, and too valuable for sheep raising, which I believe in a few years it would unquestionably be. From this large tract of land I would select a few hundred acres upon which I would establish an early lamb raising establishment. The first thing that I would do towards bringing my land into condition for my early lamb plant would be to sow the land intended for this purpose to mustard, as it takes but thirty-five days for this plant to mature and it makes good sheep feed or a good crop to plow under as a fertilizer. Mustard is used in this way in England.

"I would raise humus supplying legumes, such as the velvet bean, cowpea and beggarweed. All make good sheep feed and are splendid for plowing under. Rape, kale, cabbage, vetches, turnips and all such crops grow splendidly in the South and should give as good results as in the south and west of England because of the lack of

snow. * * * After I had grown on my farm such forage crops as I know from practical experience to be valuable for sheep raising, especially early lamb raising, I would buy a few hundred head of the common "piney woods" ewes and cross them with rams of some of the improved mutton breeds. By way of establishing a flock of early lamb raisers I would take as many of these ewes as I could get and breed a large portion of them to a Dorset or Tunis ram with a view of establishing a flock of ewes that would inherit the early-lambing tendencies of these breeds. * * * For raising early lambs I do not see why any country in the world could surpass Florida, for as I have said before, it surely has a wonderful climate and the land seems to grow roots, cabbage, corn, cowpeas and such like crops just as easily as growing weeds. I have it upon good authority that oats, rape and peas make a wonderful growth when sown together. * * * There is no necessity of housing the ewes or the lambs, nor need of clover hay. The ewes would do well enough on the ordinary herbage of the country in the spring and summer months after the lambs are taken from them, and the roots and forage crops, etc., and the mild climate would surely produce a lamb that should vie with that raised anywhere. There is a good home market for spring lamb in Tallahassee, and, of course, Jacksonville and other southern cities. Any surplus could be shipped to New York and other large cities. As the ewes lamb early and the lambs cannot fail to be fat and ripe with good milking mothers and plenty of succulent rations, a really first-class article could be furnished. * * * Mr. C. E. Bradley established a small flock of pure-bred Dorsets on his farm near Tallahassee and raised early lambs which he sold to his friends at twenty-five cents per pound, which, although not a big price for this toothsome article, shows what can be done in the neighborhood of Tallahassee and other



Leon County Ewes and Lambs

points in Florida in this business. One feature which appeals to me in the early lamb business in Florida is that the forage crops most suitable for early lamb raising are at their best in the fall and winter when the ewes and lambs need them most. After the lambs are taken from the ewes, the ewes could be turned loose on the range."



Owned by J. A. Jackson, at Crescent Beach, St. Johns County

Conditions Favorable to Poultry Raising

NO amount of investigation is necessary to ascertain this fact. People have their little flocks of chickens in their back yards in town and on their farms just as they do in the North but as is the case there, they are not plenty enough to fill the strong demand for good fresh eggs and broilers.

There are many poultrymen in Florida who are making a success of the business on a large scale. They are finding advantages in Florida due to the climate that are not duplicated elsewhere.

A notable success with a good sized poultry farm in Florida is evidenced in the case of J. A. Jackson, of Crescent Beach, on Anastasia Island, about ten miles below St. Augustine. Mr. Jackson established his farm four years ago, beginning with twenty-one hens and five cockerels. He now has a flock of from three thousand to eight thousand, depending on the season of the year, of as fine White Leghorns, Rhode Island Reds and White Orpingtons as are to be seen anywhere in the United States. Mr. Jackson has raised almost all of his own stock, having purchased but sixty breeding hens and one hundred baby chicks during the four years. Twenty-one of his hens have laid 1,495 eggs in 121 days, from which he incubated 1,196 chickens and raised 1,034 to maturity. From the standpoint



One Thousand White Leghorn Pullets at Crescent Beach Poultry Farm, near St. Augustine, St. Johns County

of profit Mr. Jackson believes the White Leghorn to be the best breed for Florida. He states that he finds a ready market at a good price all the year round for all the eggs he can produce and that this production runs in the neighborhood of one thousand per day during the best laying season of the year. Mr. Jackson devotes considerable attention to the production of fancy breeding stock for which he finds a ready market at good prices.

In a recent issue, The Everglades Magazine, published at Miami, prints the following letter from Mrs. Theo. Ivens that shows what a small flock can do:

"We came to Florida in September, 1910. In October we got eight hens and a cock—all of the Barred Plymouth Rock variety. I had never raised any chickens, as we had always lived in town. The first year I raised one hundred and seventy chickens from those nine. Did not lose any from disease, but a few died from accidents.

"For three years I kept an account of chickens and eggs sold and amount of feed bought. At the end of that time we had a balance of \$268.20 in our favor. We had what chickens and eggs we wanted to use and had one hundred and ninety chickens to begin our fourth year.

"Since then we have not kept an account. At present we have one hundred and thirty hens and ninety-five little chickens. We are getting from seventy-five to ninety-five eggs each day.



Mrs. Theo. Ivens' Chickens at Miami, Dade County

"We get an average of forty cents per dozen for eggs."

J. H. Wendler, of Lakeland, Florida, secretary and manager of the Florida Poultrymen's Association and an authority on raising poultry in this state, says:

"That we can raise chickens in Florida is evidenced by the fact that a certain breeder of this state has exhibited his fowls all over the Southeast and central states and has never failed to take off the majority of the blue ribbons at each and every show and at some has been 'hog' enough to take all the blues in all the varieties that he breeds, and at one show won sweepstake cockerel with a bird about five months old.

"All this is not said for the benefit of that breeder but simply to show that we can raise chickens in Florida, and that a five months' old bird is sufficiently developed to win over older birds raised in other states that should have been more mature for their age.

"Now let us see why we can raise chickens here that are mature at an early age. Primarily one of the first essentials to chicken raising is good range and fresh air, for fowls that are raised in closed doors with poor ventilation are always delicate and weak, whereas chicks raised in the open are just the contrary. But the Northern breeder cannot raise his chicks out of doors, at least, not the early hatched, for the severity of the Northern winters and early springs will not permit of this.

"Our ability to raise green feed twelve months in the year is another important factor in chick development, for nothing beats greens for both mature and young chicks.

"Now let us consider the cost of chick production and see if this is not verily 'a poultrymen's paradise.'

"To start with, let us take the breeding stock. Fed on plenty of good green food they produce good eggs and plenty of them with



Breeding Pens at Crescent Beach Poultry Farm, St. Johns County

the strongest vitality possible in the germ, which in turn produces strong, healthy chicks that grow off into fine robust specimens; thus insuring the health of the breeders. This green food should be one-half of a chick's diet and can be supplied in the form of collards, cabbage, lettuce, celery tops, rape, rutabaga, etc., and can be grown at a very minimum of expense. Green food not only furnishes nourishment but bulk also, which is essential to a chick and helps to keep down the grain bill; hence the cost of production in the feeding end of the game is no more, or even less than the cost of feeding chicks where the grain grows.

"The next item of expense to consider is the incubation and brooding.

"If this is done by artificial means then one can readily understand why in this climate, where we seldom have any cold weather, the cost of operating an incubator is very little, for the flame need not be turned up very high as there is no outside temperature to combat.

"The same condition holds good in operating the brooders, for we need only a small flame in the lamp and that only for a few days or a week at the most, then the chicks can take care of themselves; and in the spring of the year a fireless brooder will answer the purpose to a nicety.

"We have now cut down the feed bill and the cost of incubation and brooding and should be on our way to have a nice flock coming



White Leghorns at Fellsmere, St. Lucie County

along, in all of which we have the advantage of our Northern brethren. But we still have another advantage and that is the ability to raise chicks at a time when all the rest of the world sleeps, so to speak.

"Most of the hatching in Florida is done in the winter and early spring months and we are ready to supply broilers and fryers before the other fellow commences to hatch, hence we get a better price for them and there are times in the year when one can go down Franklin street in Tampa with a load of broilers and get his own price for them, but they always command a market at seventy-five cents to ninety cents each, while eggs will average the year around thirty-five cents a dozen."

Turkeys

THE business of raising turkeys for market has not been gone into extensively in Florida. Indeed, the entire country has not overdone the business of turkey raising as the census of 1900 shows that on five million farms in the United States a little over six and a half million turkeys were produced. The fact that a southern state, Texas, produced the greatest number of these birds, makes it appear that they are adapted to a warm climate, and that may be one reason why the limited experiments that have been conducted in Florida have proven successful. The turkey in Florida requires a good range, plenty of grit and a reasonable proportion of



Flock of Turkeys near Indian River City, Brevard County

wheat and scratch-corn. Regardless of the fact that Christmas and Thanksgiving in Florida are snowless, the turkey is the main feature of the dinner menu, and it never fails to command a fancy price. Inasmuch as young turkeys particularly are delicate, Florida's mild winters minimize the risk in raising them to a great extent.

In the central and southern portions of the state birds need only to be protected from rain and cold winds. It is, however, considered advisable to provide sufficient shelter to meet any emergency.

Ducks and Geese

MOST varieties of ducks and geese do exceptionally well in Florida. The wild species of both varieties of these water fowl winter in the state by the millions, especially is this true in the case of ducks. Of the tame ducks, the Indian Runner breed seems to be the best for all purposes. W. S. Maxwell, of Melbourne, Florida, states that he experimented to quite an extent with Indian Runner ducks with very gratifying success. He states that his ducks were easy to keep in good laying condition and that they were excellent layers. Many Florida people have small flocks of Indian Runners from which they readily secure a very satisfactory yield in eggs. They are excellent for the table and for this purpose always sell at a good price. The demand for dressed birds is always good during the winter season.



Spring Lake in Chuluota Showing Lake Katherine Beyond, Also Resident Agent's Bungalow, Florida East Coast Railway Station and New Hotel

Your Opportunity at Chuluota

NO greater opportunity exists in Florida for diversified farming than on the Chuluota section of Seminole county. The varieties of soils in this section are admirably suited to growing the finest citrus fruits, vegetables and field crops, and there is a large area of fine grazing land for livestock raising; lakes supply fresh water. From the standpoint of beauty and development possibilities the townsite of Chuluota is hardly equalled anywhere in Florida. It embraces about 640 acres of rolling high pine lands and contains several beautiful lakes either wholly within or adjoining its borders. Chuluota is located on the Okeechobee division of the Florida East Coast Railway and has daily train service (except Sunday) each way, connecting with the main line at Titusville. The Chuluota Company, owner of the townsite and the ten thousand acres of farming and fruit lands surrounding the same, has laid out and hardsurfaced a number of streets in the town, including beautiful drives around and on the borders of the lakes. Besides Resident Agent Chas. D. Brumley's bungalow, the company has just completed a fine modern brick hotel with a large number of guest rooms. The new railroad station with a telegraph office is open, and the new general store is now serving the wants of the surrounding population of Chuluota. In the vicinity of Chuluota there is a postoffice and another general store, many farm homes and bearing orange and grapefruit groves.



A Hardsurfaced Road Leading Into Chuluota. Railroad Agent's Cottage at the Right

Further information may be obtained from Mr. J. E. Ingraham, President of the Chuluota Company, and Vice-President of the Florida East Coast Railway Co., St. Augustine, Florida; W. E. Reese, 243 Fifth Avenue, New York; Louis Larson, 109 W. Adams Street, Chicago, Ill., or Charles D. Brumley, resident agent of the Chuluota Company, Chuluota, Florida.

Kenansville

VALUABLE farming and fruit lands surround this new town on the newly constructed Okeechobee division of the Florida East Coast Railway. Kenansville is located in the east central part of Osceola county adjacent to the famous Kissimmee valley cattle range. The land about Kenansville is divided into five and ten-acre tracts and is being sold readily by the Okeechobee company at very reasonable prices; the location is decidedly healthy and the lands are highly productive. The place is ideal for livestock farming. The Florida East Coast Railway has a new station at Kenansville and serves the town with daily train service (except Sunday) each way. Full information concerning prices, terms, etc., can be had by addressing J. E. Ingraham, President and General Manager of the Okeechobee Company, at St. Augustine, Florida; A. L. Hunt, resident sales agent, Kenansville, Florida; Louis Larson, Northwestern Agent, 109 W. Adams Street, Chicago Ill., or W. E. Reese, 243 Fifth Avenue, New York.



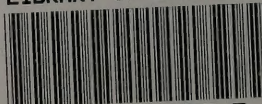
Prairie Land in the Neighborhood of Okeechobee

Okeechobee, a Place With a Future

OKEECHOBEE has been designated as the town home of the suburban farmer, ranchman or planter. The Okeechobee district is bound to be a big crop country for the livestock farmer, the truck farmer or the fruit grower. The great Lake Okeechobee region contains millions of acres of the richest land in the country that will be producing enormous yields of fruit, vegetables and livestock within a few years. The new Okeechobee division of the Florida East Coast Railway, from the main line at Titusville, taps this vast country making a large section close to Okeechobee available for settlement. The town is located directly at the head of Lake Okeechobee, the second largest lake in the United States, thirty miles wide and forty miles long. Canals large enough for good-sized steamboats connect the lake with both the east and west coasts of the state. The Okeechobee Company, owner of the townsite and a large area of farm lands adjacent thereto, is now offering town lots and farms in sizes to suit the purchaser at wonderfully low prices, when the opportunity for profit is considered that is bound to follow the natural development of the country. Full information concerning prices, terms, etc., can be had by addressing J. E. Ingraham, President and General Manager of the Okeechobee Company, at St. Augustine, Florida; W. L. Bragg, resident sales agent, Okeechobee, Florida; Louis Larson, Northwestern Agent, 109 W. Adams Street, Chicago, Ill., or W. E. Reese, 243 Fifth Avenue, New York.

Live Stock Farming in Florida

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